

What is claimed is:

1           1. A spacer for attaching onto a printed wiring board  
2   to which is fixed an electronic component having a component  
3   package, on one of whose surfaces a connection terminal  
4   is arranged, said spacer comprising an elastic member with  
5   no ends thereof,

6           said elastic member being adapted to be detachably  
7   attached to the printed wiring board in such a way as to  
8   enclose the electronic component to seal a gap between  
9   the electronic component and the printed wiring board,  
10   and

11          said elastic member being adapted to be attached  
12   to and detached from the printed wiring board by exploiting  
13   elastic deformation of said elastic member.

1           2. A spacer as set forth in claim 1, wherein said  
2   elastic member has a frame-like shape with an inner outline  
3   which is similar in shape to an outline of the component  
4   package, and is smaller in length than the outline of the  
5   component package, and is thinner than the gap between  
6   the electronic component and the printed wiring board.

1           3. A spacer as set forth in claim 1,  
2           wherein said elastic member has a frame-like shape  
3   with an inner outline which is similar in shape and length  
4   to an outline of the component package and is thinner than

5 the gap between the electronic component and the printed  
6 wiring board, and  
7 wherein the frame-like shape has a pair of hook  
8 portions for projecting into the gap between the electronic  
9 component and the printed wiring board, the hook portions  
10 being provided on the inner outline of the frame-like shape  
11 to oppose to each other.

1 4. A spacer as set forth in claim 2,  
2 wherein the frame-like shape has an outer outline  
3 greater in length than the outline of the component package,  
4 and  
5 wherein the frame-like shape has at least one slit  
6 thereon extending from the inner outline toward the outer  
7 outline of the frame-like shape.

1 5. A spacer as set forth in claim 3,  
2 wherein the frame-like shape has an outer outline  
3 greater in length than the outline of the component package,  
4 and  
5 wherein the frame-like shape has at least one slit  
6 thereon extending from the inner outline toward the outer  
7 outline of the frame-like shape.

1 6. A spacer as set forth in claim 4, wherein the  
2 frame-like shape has a round hole formed at one end of  
3 the slit.

1           7. A spacer as set forth in claim 5, wherein the  
2 frame-like shape has a round hole formed at one end of  
3 the slit.

1           8. A spacer as set forth in claim 6, wherein the  
2 round hole functions as a jig hole for use in removing  
3 the spacer from the electronic component and the printed  
4 wiring board.

1           9. A spacer as set forth in claim 7, wherein the  
2 round hole functions as a jig hole for use in removing  
3 the spacer from the electronic component and the printed  
4 wiring board.

1           10. A spacer as set forth in claim 1, wherein said  
2 elastic member, while in contact with the printed wiring  
3 board, is attached around the component package by pressure  
4 due to the elastic deformation of said elastic member.

1           11. A spacer as set forth in claim 10, wherein said  
2 elastic member has a cross-sectional shape with a  
3 projecting portion thereof, which projects into the gap  
4 between the electric component and the printed wiring board  
5 when said elastic member is attached to the printed wiring  
6 board.

1           12. A spacer as set forth in claim 1,

2            wherein said elastic member has a frame-like shape  
3    with an inner outline which is similar in shape to an outline  
4    of the component package, and said elastic member, while  
5    in contact with the printed wiring board, is attached around  
6    the component package by pressure due to the elastic  
7    deformation of said elastic member, and

8            wherein the frame-like shape has a catch protrusion  
9    on its inner outline, which catch protrusion is adapted  
10   to protrude into the gap between the electronic component  
11   and the printed wiring board.

1            13. A printed circuit board, comprising:

2            an electronic component having a component package,  
3    on one of whose surfaces a connection terminal is arranged;  
4            a printed wiring board to which said electronic  
5    component is fixed; and

6            a spacer formed as an elastic member with no ends  
7    thereof detachably attached to said printed wiring board  
8    in such a way as to enclose said electronic component to  
9    seal a gap between said electronic component and said  
10   printed wiring board, said elastic member being adapted  
11   to be attached to and detached from said printed wiring  
12   board by exploiting elastic deformation of the elastic  
13   member.

1            14. A printed circuit board as set forth in claim  
2    13, wherein the elastic member has a frame-like shape with

3 an inner outline which is similar in shape to an outline  
4 of the component package, and is smaller in length than  
5 the outline of the component package, and is thinner than  
6 the gap between the electronic component and said printed  
7 wiring board.

1 15. A printed circuit board as set forth in claim  
2 13, wherein the elastic member, while in contact with said  
3 printed wiring board, is attached around the component  
4 package by pressure due to the elastic deformation of the  
5 elastic member.

1 16. A printed circuit board as set forth in claim  
2 13, wherein the elastic member has a frame-like shape with  
3 an inner outline which is similar in shape to an outline  
4 of the component package, and the elastic member, while  
5 in contact with said printed wiring board, is attached  
6 around the component package by pressure due to the elastic  
7 deformation of the elastic member, and  
8 wherein the frame-like shape has a catch protrusion  
9 on its inner outline, which catch protrusion is adapted  
10 to protrude into the gap between the electronic component  
11 and said printed wiring board.

1 17. Electronic equipment, comprising a printed  
2 circuit board which includes: an electronic component  
3 having a component package, on one of whose surfaces a

4 connection terminal is arranged; a printed wiring board  
5 to which the electronic component is fixed; and a spacer  
6 formed as an elastic member with no ends thereof detachably  
7 attached to the printed wiring board in such a way as to  
8 enclose the electronic component to seal a gap between  
9 the electronic component and the printed wiring board,  
10 the elastic member being adapted to be attached to and  
11 detached from the printed wiring board by exploiting  
12 elastic deformation of the elastic member.

1 18. Electronic equipment as set forth in claim 17,  
2 wherein the elastic member has a frame-like shape with  
3 an inner outline which is similar in shape to an outline  
4 of the component package, and is smaller in length than  
5 the outline of the component package, and is thinner than  
6 the gap between the electronic component and the printed  
7 wiring board.

1 19. Electronic equipment as set forth in claim 17,  
2 wherein the elastic member, while in contact with the  
3 printed wiring board, is attached around the component  
4 package by pressure due to the elastic deformation of said  
5 elastic member.

1 20. Electronic equipment as set forth in claim 17,  
2 wherein the elastic member has a frame-like shape with  
3 an inner outline which is similar in shape to an outline

4 of the component package, and the elastic member, while  
5 in contact with the printed wiring board, is attached around  
6 the component package by pressure due to the elastic  
7 deformation of the elastic member, and  
8        wherein the frame-like shape has a catch protrusion  
9 on its inner outline, which catch protrusion is adapted  
10 to protrude into the gap between the electronic component  
11 and the printed wiring board.